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imagery analysis report

New Soviet Mobile Air Defense
Command Post: DOG EAR (S)

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NEW SOVIET MOBILE AIR DEFENSE COMMAND POST: DOG EAR (S)**INTRODUCTION**

1. The Soviets have been developing a new, ground forces-associated, mobile, air defense command post since the mid-1970s. This mobile command post, designated DOG EAR (formerly DO-EL-03), consists of an acquisition radar and command, control, and communications (C³) equipment mounted on a tracked armored vehicle. It could operate with a variety of regimental- or division-level air defense forces and would provide lower echelon air defense units with an early warning capability they now lack. It will also integrate these units more closely into the air defense network during battle. At least pilot-series production has begun on DOG EAR, and full-scale production and deployment could begin at any time. (S/WN)

2. This is the first report on DOG EAR and summarizes information on the development, testing, production, and deployment of this system. Analysis of available satellite imagery from June 1976 through August 1983 is supplemented [redacted] The report includes a conceptual drawing, seven photographs, and two maps. (S/WN)

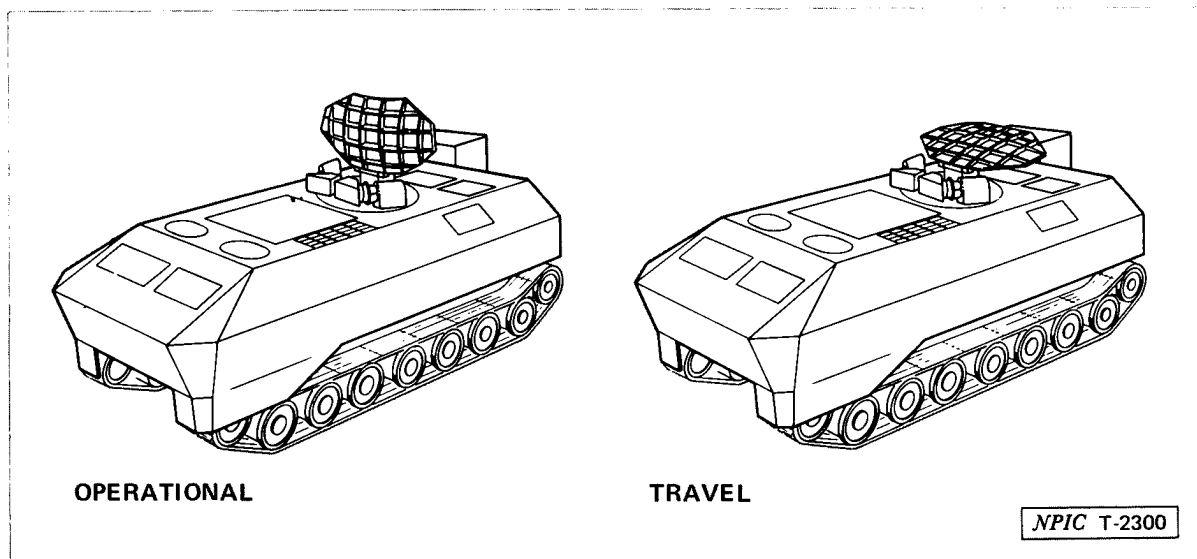
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DISCUSSION

3. The DOG EAR (Figure 1) is a variant of the tracked armored command reconnaissance vehicle ACRV M-1974. A [redacted] rectangular parabolic radar antenna with clipped corners, which folds down to the rear for travel, is mounted on a rotatable platform

in place of the turret. The antenna is similar in shape and configuration to the acquisition radar antenna of the LAND ROLL radar system on the SA-8 transporter-launcher and radar. A large rectangular storage box is mounted on the right rear of the vehicle. (S/WN)

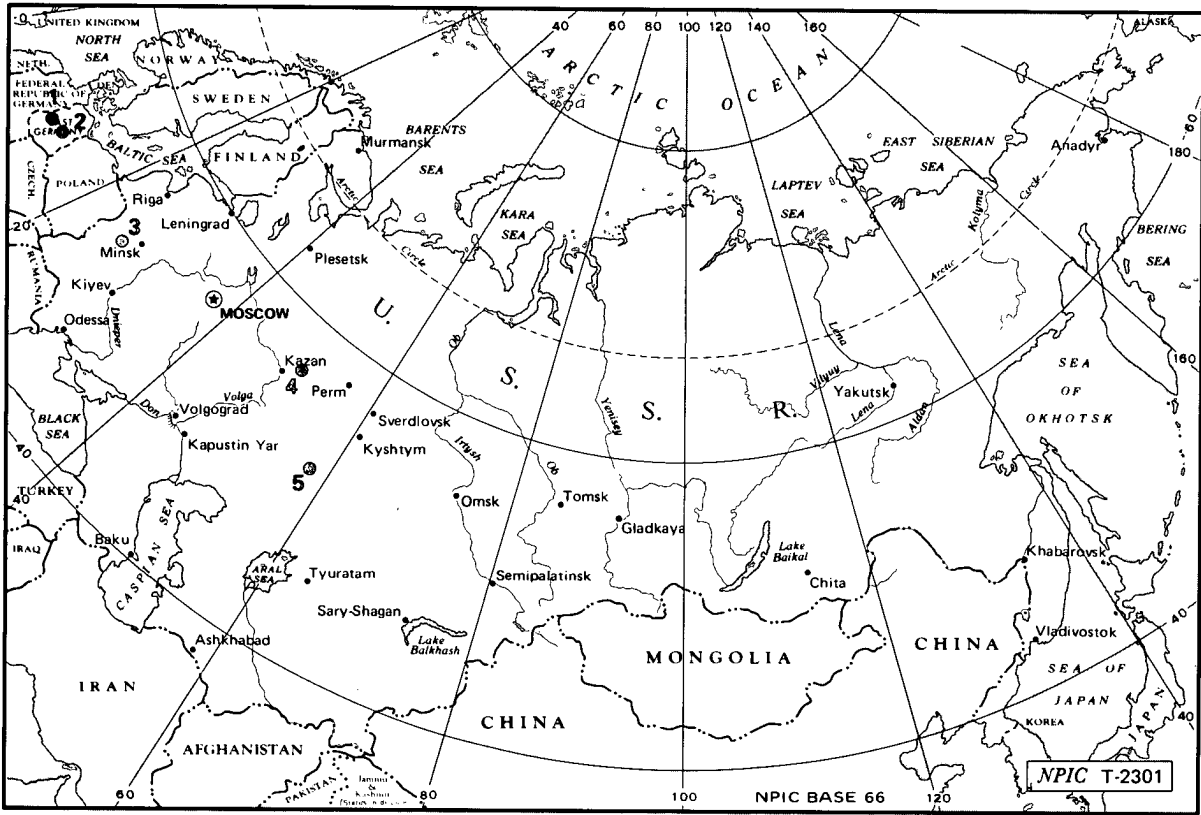
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**FIGURE 1. CONCEPTUAL DRAWING OF THE DOG EAR IN OPERATIONAL AND TRAVEL MODES**

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Installation	BE number	Function
[redacted]		
3 Volka Artillery/SAM Maneuver Training Area	[redacted]	Field test/troop training
4 Yoshkar-Ola Optical and Radar Plant Yoshkar-Ola Radar Test Facility Yoshkar-Ola Radar Test Facility Northwest		Production Test Test/storage
5 Donguz Weapons and Electronics Proving Ground Northeast		Testing

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FIGURE 2. LOCATIONS OF REPORTED DOG EAR ACTIVITY

Early Evidence

4. The DOG EAR, or activities relating to it, have been observed [redacted] at five Soviet [redacted] locations (Figure 2) since 1977:¹

Three electronics test facilities—Donguz Weapons and Electronics Proving Ground Northeast, Yoshkar-Ola Radar Test Facility, and

Yoshkar-Ola Radar Test Facility Northwest;
One production plant—Yoshkar-Ola Optical and Radar Plant 297;
Two training facilities—Volka Artillery/SAM Maneuver Training Area, and [redacted]

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5. The DOG EAR was first observed on overhead imagery on [redacted] at Donguz (Figure 3), which is the main Soviet support facility for test and evaluation of ground forces-associated antiaircraft artillery (AAA) and SAM systems and their associated electronics. It was given the NPIC interim designation DO-EL-03. This was the only time the DOG EAR has been observed at Donguz.

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FIGURE 3. INITIAL OBSERVATION OF DOG EAR AT DONGUZ

4 SAM system was produced there prior to June 1981. This plant also installs electronics equipment in ACRV M-1974s, which have been seen there canvas-covered since 1979, and box-bodied van trucks.

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Recent Evidence

Three air defense-related electronics production and test facilities—a manufacturing plant, and two radar test facilities—have been identified in the Yoshkar-Ola area (Figure 4). The Yoshkar-Ola Optical and Radar Plant 297 produces FLAP WHEEL AAA fire control radars, computer/electronics van trailers associated with SA-2, SA-3, SA-5 and SA-10 SAM systems, and the SA-X-12 command and control vehicles. The PAT HAND tracking and guidance radar for the SA-

7. Yoshkar-Ola Radar Test Facility, located 3.3 nautical miles (nm) WNW of the plant, is the main developmental test and calibration facility for the plant. Several sheds are used to conceal test activities there. FLAP WHEEL radars are routinely seen at this facility, and canvas-covered turretless ACRV M-1974s have been at this facility since October 1981. Yoshkar-Ola Radar Test Facility Northwest is 2.0 nm NW of the plant and serves primarily as

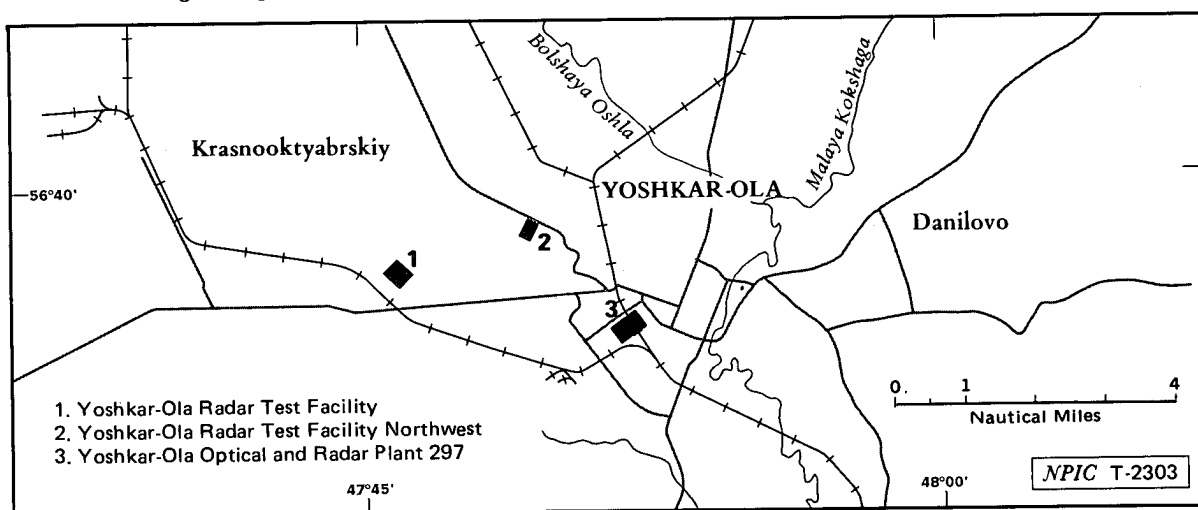


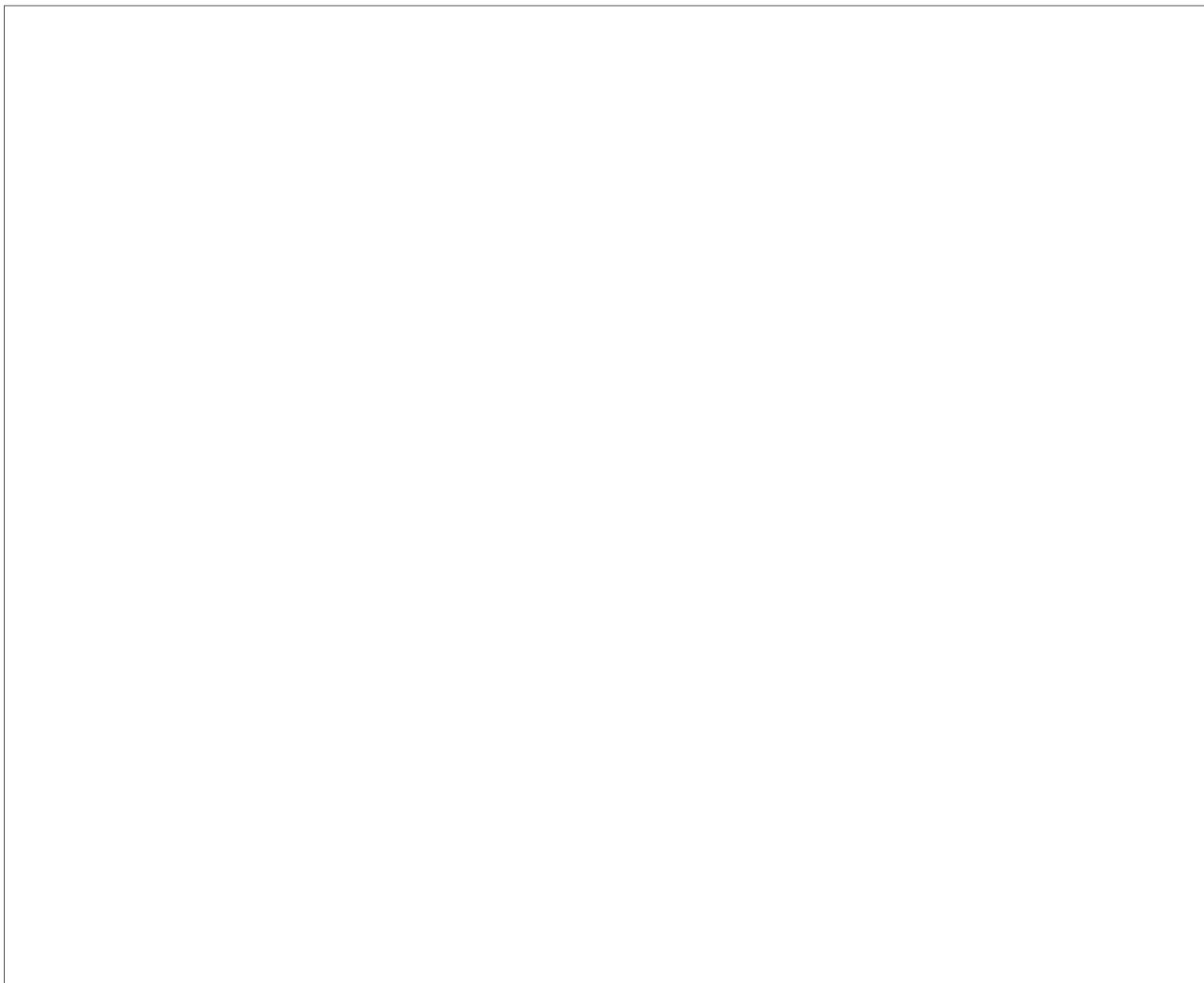
FIGURE 4. AIR DEFENSE ELECTRONICS-RELATED PRODUCTION AND TEST FACILITIES IN THE YOSHKAR-OLA AREA

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the plant's main vehicle storage area. Most types of vehicles that have been observed at the plant have also been seen there. Canvas-covered turretless ACRVs have been there since July 1982. (S/WN)

Recent Imagery Evidence

9. The first imagery-derived evidence of the presence of DOG EAR at any of the Yoshkar-Ola facilities was the observation of two possible canvas-covered DOG EARs at the radar test facility on [REDACTED] (Figure 5). On the same date, a new test shed was under construction. The presence of DOG EAR at Yoshkar-Ola was confirmed on [REDACTED] when one DOG EAR in operational mode was seen in this test facility adjacent to the new shed (Figure 6). A probable DOG EAR without the radar antenna was in the FLAP WHEEL storage yard of the Yoshkar-Ola plant on the same date (Figure 7). (S/WN)

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10. Activity related to field testing and troop training with the DOG EAR has been reported at one Soviet [REDACTED] locations since March 1983. [REDACTED]



Imagery Analyst's Comments

11. Based on all available information, it seems certain that the DOG EAR, [REDACTED]

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[REDACTED] is a mobile air defense command post mounting an acquisition radar and will be deployed with regimental- or divisional-level air defense units. Use of the tracked ACRV M-1974 chassis provides sufficient mobility to allow the DOG EAR to keep up with advancing ground forces units and their air defense forces in a fluid battle situation. At least pilot series production of DOG EAR has begun at Yoshkar-Ola Optical and Radar Plant 297, and this system has been deployed for probable field testing and troop training at Volka, probably with ZSU-23/4 and



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REFERENCES

IMAGERY

All available satellite imagery acquired from June 1977 through August 1983 was used in the preparation of this report. (S/WN)

DOCUMENTS

1. NSA. *New Possible Acquisition Radar Initially Active at Volka SAM Training/Maneuver Area, Minsk ADD*, June 1983

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2. NSA. *New Probable SAM Command and Control Equipment Reaches Developmental Milestone*

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3.

Comments and queries regarding this report are welcome. They may be directed to
USAF, Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC,

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